

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning on page 3, line 2, as follows:

Our novelty and innovation resides in the use of microactuators based on conjugated polymers being electrically operated and mounted in or on a catheter or needle. These microactuators are positioned with the help of the catheter, and then activating these microactuator structures that are ~~activated and~~ carried on the needle. The microfabrication of such microactuators renders possible a number of geometries and a size as small as-10 μ m, which is difficult to produce by mechanical production techniques. They may be produced by use of the method presented U.S. Patent 5,771,902 and then mounted in or on the needle or catheter, or they might be produced by novel manufacturing methods. With the invention described therein, completely novel microsurgery tools are now available.

Please amend the paragraph beginning on page 4, line 7, as follows:

Another embodiment is a structure for controlling the flow through blood vessels. The simplest example is that of a clip used to prevent blood flow to a biological structure downstream in the blood vessel. Such a clip, or series of clips, would be mounted and left to hold a firm grip on the blood vessel and thus to prevent the flow of blood. In Figure [[2]] 1c is shown a series of structures suitable for constricting blood vessels. This array of tools may only be collectively addressed, and the tool array is designed to set free the outermost clip, on actuation of [[the]] all the clips 5, a mechanism of confining the movements of all but the outermost clip is needed. This is done by assembling the clip array 5 into a cylindrical housing 3, preferably a catheter, prior to insertion in the body. The cylindrical housing 3 confines the motion of microactuators, which search in vain to expand the strong metal casing on operation. When the outermost clip

1 is actuated, the clip is opened; likewise is the next-to-the outermost clip 4 partially free to move as it is protruding outside the cylindrical housing. Therefore the partial opening of the next-to-the outermost clip 4 sets the outermost clip 1 free, as well as opens it up for subsequent spontaneous closing the site to be clipped.

Please amend the paragraph beginning on page 4, line 26, as follows:

Figure 3A-3B show a fifth embodiment 230 of the present invention. Arrays of fingers could be used to hold cylindrical objects, such as nerves and nerve fibers, or blood vessels. With the help of ~~microactuators~~ microactuators holding the structures (Fig. 3A-[[3D]]3B), adjacent microstructures can operate as neural sensing or activating electrodes, and will enable recording of signals from or to activate nerves. Furthermore, they could be used as a synthetic neural connector, or bridging a severed nerve or nerve fiber. A neural connector 230, with a number of small fingers 220 coil around two cylindrical nerves 200, 210 to tightly hold the nerve 240. Two separate nerves 200, 210 are here joined with the help of a common neural connector 230. This procedure is used to regrowth the nerves. In addition, small electrodes (not shown) can be fashioned along with the microfingers 220, and be used to sense or excite nerve signals.